MECH 331: JUNIOR LABORATORY I

(1 Credit)

Spring 2022

Contact Information

Instructor: David A. Trevas, Ph.D.
Office: Duncan Hall 3129
Email: trevas@rice.edu
Office Hours: TBD

Course Information

Prerequisites: MATH 101/102, PHYS 101
Lecture Schedule:

- Section 1: M 2:45 – 5:15 PM
- Section 2: W 2:45 – 5:15 PM

Location: Ryon Lab basement

Lab Assistant Contact Information: TBD

Course Description

Junior Laboratory I provides instruction in testing Engineering materials. This course is primarily concerned with obtaining, recording, and processing experimental information; interpreting and presenting experimental information; and demonstrating principles and relations covered in lecture courses.

Course Objectives

The student will learn to perform basic testing techniques on engineering materials. As a result, the student will obtain familiarity with common experimental equipment, and develop proficiency in taking engineering measurements.

Lab Experiments

There will be a total of eight experiments conducted throughout the semester, one each week:

1. Electrical Resistance Strain Gage
2. Tensile Test of Various Metals
3. Torsion Test of Circular Bars
4. Deflection of Beams
5. Compression of Beams
6. Plate with Hole
7. Strain Gage Rosette
8. Beam Resonance

Grade Policies

Lab Reports – 100%

Lab reports will be uploaded to Canvas two weeks after the experiment is performed. The format of the report will be specified in class. The bulk of the lab report will be a group effort. Each student will have to write their own independent Discussion section as a separate assignment. Possible topics to address in the Discussion section will be given in class. It is critical that each student write their Discussion section by themselves and *not* in consultation with their lab partners. Your grade will reflect a combination of the group's effort and your own.

Note: Due to the ongoing global pandemic (as of January 2022), alternative assignments may be given and duly considered in your course grade.

Absence Policies

Students participating in **university-sponsored** extracurricular activities may need to miss a lecture. These students should notify the instructor *in advance* to make up missed work.

Rice Honor Code

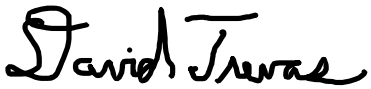
In this course, all students will be held to the standards of the Rice Honor Code, a code that you pledged to honor when you matriculated at this institution. If you are unfamiliar with the details of this code and how it is administered, you should consult the Honor System Handbook at http://honor.rice.edu/honor-system-handbook/. This handbook outlines the University's expectations for the integrity of your academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process.

Disability Resource Center

If you have a documented disability or other condition that may affect academic performance you should: 1) make sure this documentation is on file with the Disability Resource Center (Allen Center, Room 111 / adarice@rice.edu / x5841) to determine the accommodations you need; and 2) talk with me to discuss your accommodation needs.

Syllabus Change Policy

This syllabus is only a guide for the course and is subject to change with advanced notice.



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